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EXAMINER

COURTENAY III, ST JOHN

| ART UNIT | PAPER NUMBER |
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2126

DATE MAILED: 02/27/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/274,979

Applicant(s)  
Merrick et al.

Examiner  
St. John Courtenay III

Art Unit  
2126



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 15, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 125-179 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 125-179 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 16
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

ST. JOHN COURTENAY III  
PRIMARY EXAMINER

### Detailed Action

The Examiner has reviewed the two provisional applications and does not find enabling support for the instant utility application claims with respect to at least the first-filed provisional application (Provisional application serial #60/079,100, filed March 23, 1998). Applicant's representative conceded in a telephone conversation with the Examiner that the later filed utility application claims were not fully enabled by the first filed provisional application.

Accordingly, new grounds of rejection are set forth below responsive to Applicant's amended claims.

**As per canceled claims 114—117:**

Applicant states in the response received Jan. 15, 2003 (see paper #15, page 17, 2<sup>nd</sup> paragraph): *"Submitted herewith as requested by the examiner is a copy of page 80 which was included with the application as originally filed."* However, no substitute page 80 was found in the papers filed Jan. 15, 2003.

Canceled claims 114—117 are missing from the instant application file wrapper.

Even though Applicant has now canceled these claims, a replacement sheet 80 is still required, as requested in the last office action. Either page 80 was missing as originally filed, or was lost within the PTO.

The scope of surrendered subject matter cannot be ascertained without a complete accounting of ALL claims presented in the instant patent application.

A replacement sheet 80, as originally filed, is required in response to this office action.

### **Claim Rejections - 35 U.S.C. 102**

**The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 125-179 are rejected under 35 U.S.C. § 102(a) as being anticipated by Goldfarb et al., "The XML Handbook", Prentice Hall PTR, pages 555-568, June 26, 1998.**

Note: The cited reference states that Joe Lapp (one of the named inventors in the instant application) "prepared" chapter 38, beginning on page 555. However, Joe Lapp is not listed as an author for "The XML Handbook" and it is unclear to what extent the listed authors (Goldfarb et al.) contributed to the chapter "prepared" by Joe Lapp and "sponsored" by "webMethods, Inc." Therefore, the cited reference appears to constitute a different inventive entity and is considered as prior art by the Examiner under 35 U.S.C. § 102(a). The date of publication the Goldfarb reference (June 26, 1998) is before the date of the second provisional application filing date (see provisional application 60/096,909, filed Aug. 17, 1998).

### **As per claim 125:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine, comprising the steps of generating a service invocation request at the second machine using a markup language-based message encoding [see XML RPC page 561], and transmitting the service invocation request from the second machine, wherein the message includes plural elements and wherein all of the elements have element type indicators selected from an encoding group having a predetermined number of members, with at least two of the members designating elements containing other elements having element type indicators belonging to the group [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion] .

**As per claim 126:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request generated at a second machine in compliance with a markup language-based message encoding [see XML RPC page 561], wherein the message includes plural elements and wherein all elements in the message have element type indicators selected from an encoding group having a predetermined number of members, with at least two of the members designating elements containing other elements having element type indicators belonging to the group; and invoking the service in response to the request [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion].

**As per claim 127:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine, comprising the steps of: generating a service invocation request message at the second machine in compliance with a markup language-based message encoding, [see XML RPC page 561] wherein the message includes plural elements and wherein all elements in the message have element type indicators selected from an encoding group having a predetermined number of members, including at least a first element type indicator for designating an element containing data, and a second element type indicator for designating an element containing a set of elements having element type indicators selected from the group; and transmitting the message [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion].

**As per claim 128:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request message generated at a second machine in compliance with a markup language-based message encoding [see XML RPC page 561], wherein the message includes plural elements and wherein all elements in the message have element type indicators selected from an encoding group having a predetermined number of members, including at least a first element type indicator for designating an element containing data, and a second element type indicator

for designating an element containing a set of elements having element type indicators selected from the group; and invoking the service in response to the message [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion].

**As per claim 129:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding [see XML RPC page 561], wherein the message includes plural elements and wherein all elements in the message have element type indicators selected from an encoding group having a predetermined number of members, including at least a first element type indicator for designating an element containing data, and a second element type indicator for designating an element containing a set of elements having element type indicators selected from the group [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion].

**As per claim 130:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding, wherein the message includes plural elements and wherein all elements in the message have element type indicators selected from an encoding group having a predetermined number of members, including at least a first element type indicator for designating an element containing data, and a second element type indicator for designating an element containing a set of elements having element type indicators selected from the group [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion].

**As per claim 131:**

**Goldfarb** teaches a method according to claim any one of claims 127-130, wherein the encoding group further includes a third element type indicator for designating an element containing a set of elements having element type indicators selected from the group [see the discussion of the three element types VALUE, LIST, and RECORDREF discussed beginning on page 560].

**As per claim 132:**

**Goldfarb** teaches the encoding group includes a fourth element type indicator for designating an element containing a set of elements having element type indicators selected from the group [see the discussion of the three element types VALUE, LIST, and RECORDREF discussed beginning on page 560].

**As per claim 133:**

**Goldfarb** teaches the encoding group includes a fourth element type indicator for designating an element uniquely identifying another encoding element within a particular message [see the discussion of the three element types VALUE, LIST, and RECORDREF discussed beginning on page 560].

**As per claim 134:**

**Goldfarb** teaches the encoding group includes a fourth element type indicator for designating the absence of a data item [see the RECORD element discussed in the context of the RECORDREF element page 560].

**As per claim 135:**

**Goldfarb** teaches the encoding group includes a fifth element type indicator for designating the absence of a data item [see DIM attribute that defaults to zero, page 560].

**As per claim 136:**

**Goldfarb** teaches the encoding group includes a sixth element type indicator for designating an element containing a set of elements having element type indicators selected from the group [see “WIDL is compatible with other data definition languages such as XML-date and Resource Description Framework,” page 560].

**As per claim 137:**

**Goldfarb** teaches the third element type indicator designates an element containing an n-dimensional array (where n is an integer such that  $n \geq 1$ ) of elements having element type indicators selected from the encoding group [see RECORDRef page 560].

**As per claim 138:**

**Goldfarb** teaches the encoding provides a type label associated with an element having the first element type indicator [see optional TYPE attribute that identifies the datatype associated with the VALUE parameter element type, page 560].

**As per claim 139:**

**Goldfarb** teaches an element of the first element type indicator with no type label is assumed to be a string type element [see strings as discussed in association with the VALUE parameter element type, page 560].

**As per claim 140:**

**Goldfarb** teaches the mark-up language is XML, the element type indicators are element type names, and the type label is expressed as an XML attribute on the element having the first element type indicator, with the data type of a data item contained in the element being designated by the value of the attribute [see page 560 discussion].

**As per claim 141:**

**Goldfarb** teaches the encoding group further includes a fourth element type indicator for designating an element representing a numeric value [see DIM element page 560].

**As per claim 142:**

**Goldfarb** teaches wherein the encoding group includes multiple type names each designating a respective different type of data item contained in an element having the first type indicator [see parameter elements discussed pages 559-560].

**As per claim 143:**

**Goldfarb** teaches wherein the message further includes a semantic label for at least one data item contained in the message [see TYPE attribute for the VALUE parameter element type, page 560].



**As per claim 144:**

**Goldfarb** teaches wherein the mark-up language is XML and the semantic label is represented by the value of an XML attribute on the element containing the data item [see “compatible with XML-Data” page 560].

**As per claim 145:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine, the method comprising the steps of:  
generating a service invocation request message at the second machine in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators, the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the message including at least one data item which is a multi-level nested array element where each nesting level corresponds to a respective dimension of the array element; and transmitting the service invocation request message from the second machine [e.g., see “WIDL Web Interface Definition Language” which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, “Representing RPC messages in XML” and associated discussion].

**As per claim 146:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request message generated at a second machine in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators, the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the message including at least one data item which is a multi-level nested array element where each nesting level corresponds to a respective dimension of the array element; and invoking the service in response to the message [e.g., see “WIDL Web Interface Definition Language” which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types

disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 147:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request [see XML RPC page 561]; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators, the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the message including at least one data item which is a multi-level nested array element where each nesting level corresponds to a respective dimension of the array element; and transmitting the service invocation reply message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 148:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators [see XML RPC page 561], the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the message including at least one data item which is a multi-level nested array element where each nesting level corresponds to a respective dimension of the array element [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on

pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 149:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine, the method comprising the steps of:

generating a service invocation request message at the second machine in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators, [see XML RPC page 561] the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the request message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type, the label indicating a value of n but not indicating a size for each of the n dimensions; and transmitting the service invocation request message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 150:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request message generated at a second machine in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators [see XML RPC page 561], the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the request message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type, the label indicating a value of n but not indicating a size for each of the n dimensions; and invoking the service in response to the message [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated

discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 151:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of:

receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request [see XML RPC page 561]; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators [see XML RPC page 561], the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the reply message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type, the label indicating a value of n but not indicating a size for each of the n dimensions; and transmitting the service invocation reply message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 152:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of:

transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group of type indicators, [see XML RPC page 561] the group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the reply message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type, the label indicating a value of n but not

indicating a size for each of the  $n$  dimensions [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 153:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine [see XML RPC page 561], the method comprising the steps of: generating a service invocation request message at the second machine in compliance with a mark-up language-based message encoding wherein each element in the message is associated with a type indicator selected from a group including at least an array type indicator indicating that the corresponding element is an  $n$ -dimensional array containing a plurality of data items [see XML RPC page 561], where  $n$  is an integer and  $n \geq 1$ , the request message including at least one data item which is an array of dimension  $n$  and a label associated with the data item and designating the data item as having an array type, the encoding requiring that all data items contained within the array as direct children have the same type as one another; and transmitting the service invocation request message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 154:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of receiving at the first machine a service invocation request message generated at a second machine in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group including at least an array type indicator indicating that the corresponding element is an  $n$ -dimensional array containing a plurality of data items [see XML RPC page 561], where  $n$  is an integer and  $n \geq 1$ , the request message including at least one data item which is an array of dimension  $n$  and a label associated with the data item and designating the data item as having an array type, the encoding requiring that all data items contained within the array as direct children have the same type as one another; and invoking the service in

response to the message [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 155:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request [see XML RPC page 561]; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items [see XML RPC page 561], where n is an integer and  $n \geq 1$ , the reply message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type, the encoding requiring that all data items contained within the array as direct children have the same type as one another; and transmitting the service invocation reply message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 156:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding wherein each element in the message is associated with a type indicator selected from a group including at least an array type indicator indicating that the corresponding element is an n-dimensional array containing a plurality of data items, where n is an integer and  $n \geq 1$ , the reply message including at least one data item which is an array of dimension n and a label associated with the data item and designating the data item as having an array type,

the encoding requiring that all data items contained within the array as direct children have the same type as one another [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 157:**

**Goldfarb** teaches the label identifies the same type [see optional TYPE attribute page 560].

**As per claim 158:**

**Goldfarb** teaches the mark-up language is XML, and the label is expressed as an XML attribute of the element such that the dimension n is given by the value of the attribute [see XML-DATA discussion, see DIM attribute, page 560].

**As per claim 159:**

**Goldfarb** teaches the message is an XML document [see XML-Data, page 560].

**As per claim 160:**

**Goldfarb** teaches the message includes a label associated with the data item and designating the data item as having an array type [see RECORDREF and RECORD element, page 560].

**As per claim 161:**

**Goldfarb** teaches each of the second array elements includes at least one data item, with all data items in each of the second array elements being of the same type as one another [see RECORDREF and RECORD element, page 560].

**As per claim 162:**

**Goldfarb** teaches the label indicates the type associated with all data items contained in the array [see RECORDREF and RECORD element, page 560].

**As per claim 163:**

**Goldfarb** teaches wherein the label indicates a value of  $n$  but does not indicate a size for each of the  $n$  dimensions [see DIM attribute discussion, page 560].

**As per claim 164:**

**Goldfarb** teaches the message includes a label associated with the data item and designating the data item as having an array type, the encoding requiring that all data items contained within the array as direct children have the same type as one another [see RECORDREF and RECORD element, page 560].

**As per claim 165:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine [see XML RPC page 561], the method comprising the steps of: generating a service invocation request message at the second machine in compliance with a markup language-based message encoding [see XML RPC page 561], wherein each element in the message is associated with an element type indicator selected from a group including at least first and second element type indicators, wherein the message associates an element having the first type indicator with an ID value, and wherein the message includes an element having the second type indicator which specifies the ID value; and transmitting the service invocation request message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 166:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request message generated at the second machine in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group including at least first and second element type indicators [see XML RPC page 561], wherein the message associates an element having the first type indicator with an ID value, and wherein the message includes an element having the second type indicator which specifies the ID value; and invoking the service in response to the message [e.g., see "WIDL Web Interface Definition Language" which is an IDL



expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 167:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request [see XML RPC page 561]; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group including at least first and second element type indicators, wherein the message associates an element having the first type indicator with an ID value, and wherein the message includes an element having the second type indicator which specifies the ID value; and transmitting the service invocation reply message from the second machine [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 168:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group including at least first and second element type indicators [see XML RPC page 561], wherein the message associates an element having the first type indicator with an ID value, and wherein the message includes an element having the second type indicator which specifies the ID value [e.g., see "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated

discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 169:**

**Goldfarb** teaches a method of invoking a service at a first machine from a second machine, the method comprising the steps of:  
generating a service invocation request message at the second machine in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group [see XML RPC page 561]; the group including at least one placeholder element type indicator that designates a placeholder element which represents the absence of data; and transmitting the service invocation request message from the second machine [see DIM attribute, page 560, e.g., see also "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 170:**

**Goldfarb** teaches a method of invoking a service at a first machine, comprising the steps of: receiving at the first machine a service invocation request message generated at a second machine in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group including at least one placeholder element type indicator that designates a placeholder element which represents the absence of data [see XML RPC page 561]; and invoking the service in response to the message [see DIM attribute, page 560, e.g., see also "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 171:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: receiving at the first machine a service invocation request [see XML RPC page 561]; invoking the service in response to the request [see XML RPC page 561]; and transmitting from the first machine a service invocation reply message in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group, the group including at least one placeholder element type indicator that designates a placeholder element which represents the absence of data; and transmitting the service invocation reply message from the second machine [see DIM attribute, page 560, e.g., see also "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 172:**

**Goldfarb** teaches a method of invoking a service at a first machine, the method comprising the steps of: transmitting a service invocation request from a second machine [see XML RPC page 561]; and receiving at the second machine a service invocation reply message in compliance with a markup language-based message encoding, wherein each element in the message is associated with an element type indicator selected from a group including at least one placeholder element type indicator that designates a placeholder element which represents the absence of data [see DIM attribute, page 560, e.g., see also "WIDL Web Interface Definition Language" which is an IDL expressed in XML and associated discussion beginning page 557; see the plural elements and type indicators shown in Example 38-2, page 559 and associated discussion; see parameter types disclosed on pages 559 & 560, and see also §38.3.1, page 561, "Representing RPC messages in XML" and associated discussion].

**As per claim 173:**

**Goldfarb** teaches the placeholder element represents a programming language null object reference [see DIM attribute, where DIM value defaults to zero, page 560].

**As per claim 174:**

**Goldfarb** teaches the placeholder element identifies a data item contained elsewhere in the message [see DIM attribute, page 560].

**As per claim 175:**

**Goldfarb** teaches the message includes a type label associated with the placeholder element [see VALUE optional TYPE attribute, page 560].

**As per claim 176:**

**Goldfarb** teaches the message includes a semantic label associated with the placeholder element [see DIM attribute discussion, page 560].

**As per claim 177:**

**Goldfarb** teaches the message includes a semantic label associated with the placeholder element [see DIM attribute, page 560].

**As per claim 178:**

**Goldfarb** teaches the encoding permits any data item in a message to be associated with an ID which uniquely identifies the data item within the message [see RECORDREF and associated discussion, page 560].

**As per claim 179:**

**Goldfarb** teaches the mark-up language is XML, and the ID is associated with a data item via an XML attribute on the data item whose value is the ID [ see XML-DATA and associated discussion, page 560].

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

**How to Contact the Examiner:**

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **St. John Courtenay III** whose voice telephone number is **(703) 308-5217**. A voice mail service is also available at this number.

- All responses sent by U.S. Mail should be mailed to:  
**Commissioner of Patents and Trademarks**  
**Washington, D.C. 20231**
- Hand-delivered responses should be brought to **Crystal Park Two, 2021 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist)**. All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.

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**PTO FAX NUMBERS:**

- **AFTER-FINAL** faxes must be signed and sent to: **(703) 746-7238**.
- **OFFICIAL** faxes must be signed and sent to: **(703) 746-7239**.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

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- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (703) 305-3900**.

**Please direct inquiries regarding fees, paper matching, and other issues not involving the Examiner to: Technical Center 2100 CUSTOMER SERVICE: 703 306-5631**

Normal Flex work schedule: M – F, 7:30Am – 4:00 PM



**ST. JOHN COURTENAY III**  
**PRIMARY EXAMINER**